

US-PAT-NO: 6291808

DOCUMENT-IDENTIFIER: US 6291808 B1

TITLE: Heating system for a
microwave and convection cooking
appliance

----- KWIC -----

A convection cooking appliance includes an oven cavity surrounded, at least in part, by an air channel assembly. The appliance includes at least first and second heating units arranged in the air channel assembly, as well as an additional heating unit in the oven cavity. A blower assembly is provided to generate a recirculating flow of air through the air channel assembly and the oven cavity. A microwave generator and a catalyst are also arranged in the air channel assembly. A controller, responsive to operator inputs and signals from a temperature sensor extending into the air channel assembly, regulates the activation/deactivation state of each of the components based on a preprogrammed algorithm. One of the heating units in the air channel assembly is constituted by an open coil heating element, defined by a plurality of rows spaced in the direction of air flow downstream of the blower assembly. The arrangement of the coils functions to straighten the air flow for delivery to the oven cavity.